

Serial No. 10/529,302
Amendment Dated: April 30, 2007
Reply to Office Action Mailed: November 30, 2006
Attorney Docket No. 038665.56082US

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 1 through 14, 17 and 18. In Figures 1 and 2 the legend "Prior Art" has been inserted and in Figures 12 and 13 the block elements have been labeled. In addition, the Applicants have also corrected numerous reference numerals in order to correlate to the reference numbers appearing in the text of the specification.

Attachment: Replacement Sheet

REMARKS

In response to the objection to the drawings, as set forth in item 2 on page 2 of the Office Action, Applicants have submitted herewith a set of replacement sheets containing Figures 1 through 14, 17 and 18. In addition, a corresponding marked copy of the same figures shows the changes which have been made. In Figures 1 and 2, the legend "Prior Art" has been inserted as required, and in Figures 12 and 13, appropriate labels have been inserted into those elements illustrated in the form of blocks, also as required. In addition, Applicants have made further corrections to the reference numerals in Figures 1, 3, 6, 8, 9, 12, 17 and 18, in order to conform to the reference numerals in the specification itself.

In response to the objection to the disclosure as set forth in item 3 on page 3 of the Office Action, Applicants have amended the specification by inserting appropriate headings. In addition, corrections have been made to reference numerals on pages 17 and 18. Accordingly, reconsideration and withdrawal of this ground of objection are respectfully requested.

Claims 1-18 have been objected to, and have been rejected under 35 U.S.C. §112, second paragraph, based on certain formal issues identified by the Examiner in items 4 and 6 on pages 3 and 4 of the Office Action. In response to these grounds of objection and rejection, Applicants have amended the claims in

the manner suggested by the Examiner in item 4. Further, Applicants have amended Claims 1, 9, 11 and 17 in a manner which addresses and is believed to resolve each of the cited formal issues in item 6 of the Office Action. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 1-18 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Laermer et al (WO 98/52051) in view of Woodruff et al (Published U.S. Patent Application No. 2001/0047688), Biebl et al (U.S. Patent No. 5,447,067), Kurle et al (Published U.S. Patent Application No. 2004/0025589), Suzuki et al (U.S. Patent No. 5,559,290), Suzuki et al (EP 338,688) and Lemkin et al (Published U.S. Patent Application No. 2001/0032508). However, for the reasons set forth hereinafter, Applicants respectfully submit that all claims which remain of record in this application distinguish over the cited references, whether considered separately or in combination.

Claim 1 has been rejected over Laermer et al in view of Woodruff et al. Laermer et al, however, comprises two holding webs 24 secured to a substrate at anchor points 26, and attached to a frame 16 by coupling webs 22, one such coupling web being disposed on either side of the frame 16. Moreover, the capacitive comb structure is formed in two portions, one on either side of a seismic mass 14, each having two parts: a first part 28 having elements carried

by the seismic mass 14 and a second part having elements 32 carried by a holding bar 34 connected to a holding web 38 via decoupling webs 36. Each holding web 38 is attached to and anchored to a substrate by anchor point 40. The legs attaching the seismic mass 40 to the frame 16 are L-shaped, each having a first part projection 18 extending inward from the frame in the sensing direction 46, and the second part spring bar perpendicular to the sensing direction 46.

The Office Action equates the outer support frame of the present application with the “holding webs (24)” of the Laermer et al reference. Applicants note in this regard, however, that Laermer et al does not disclose a ring-structure; rather, it provides two holding webs. The inner support frame of the present invention is equated to the “frame (16)” of Laermer et al, which is ring-like in structure. However, it is apparent that Laermer et al does not disclose “mounting legs extending substantially perpendicularly to the sensing direction”, as the legs of Laermer et al comprise “projections (18)” and an associated “spring bar (20)”. Thus, the legs are rendered L-shaped. Accordingly, not all of the leg (*i.e.*, the “projections (18)”) extend substantially perpendicularly to the sensing direction 46.

The Office Action indicates the Examiner’s belief that the only difference between Claim 1 of the present application and Laermer et al is that the outer

support frame is “ring-like” in shape. In connection with this assumption, the Office Action sets forth the Examiner’s understanding of the technical problem that a skilled person would wish to overcome by using a ring-like structure: in particular to achieve a reduction in the amount of material to be etched from the structure.

Applicants respectfully submit, however, that the latter characterization is inaccurate. That is, a one-piece ring-like structure outer frame has the advantage of being better able to align the outer frame with the inner frame in a single plane, and provides better mechanical protection and dimensional stability of the apparatus. Moreover, a cap element can more easily be applied over the apparatus thereby sealing the proof mass and inner frame within. Laermer et al does not achieve these advantages, as the “holding webs (24)” are in two parts making it more difficult to align left and right halves of the outer frame with the inner frame in a single plane. Accordingly, it provides only limited mechanical protection. Further sealing means would be required to apply a seal over the seismic mass of Laermer et al, as the “holding webs (24)” do not extent around the full periphery of the inner frame. These advantages are unrelated to the amount of material that is to be etched from the apparatus.

Further, mounts (19) of the invention refer to short tabs which connect the inner and outer frames. Under longitudinal tension of the outer frame, tension

is not transmitted to the inner frame. Therefore, the scale factor of the apparatus which is dependent on the legs (4), remains unaffected as the legs (4) are not stressed. In Laermer et al, a measure of the longitudinal stress is transmitted through the web support (22) which is then transmitted to the support leg (20). This feature will affect the resonant frequency of the legs (20), thereby affecting the scale factor of the apparatus.

The provision of mounts (19) is not taught by either of the cited references, Laermer et al or Woodruff et al, or by a combination of these two documents. Accordingly, the present claimed invention distinguishes over both references. Moreover, Claims 2-18 dependent on Claim 1 and are therefore novel and unobvious for the same reasons.

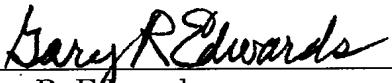
In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

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please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038665.56082US).

Respectfully submitted,



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Attachment – Replacement Sheets
 Annotated Sheets showing changes circled
 International Search Report
 International Preliminary Report on Patentability and
 transmittal thereof

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